AT THE GREAT FAIR

Some Spectacular Features of the World's Fair.

SOME STARTLING EXHIBITS.

Everything to Be Conducted On a Scale of Magnitude and Magnificence Hitherto Unparalleled.

It is a curious study to observe how many features of the world's fair may properly be described as "the biggest in the world." To begin with, the grounds are larger than the size of any previous world's fair. The main hall—Manufactures and Liberal Arts building—is the climax of all construction work in modern times; the money spent and to be expended on the grounds and buildings is double any appropriation ever made for a similar purpose; and the total value of promised exhibits reaches the enormous sum of $150,000,000, eclipsing the aggregate value of all the exhibits of any two modern exhibitions.

These figures, stupendous as they seem, find a counterpart in the magnitude of exhibits. Whether one takes the model dairy, the agricultural exhibit, the power plant in Machinery hall, the electrical illumination, the marvels of the Mines building, the flowers and fruits of Horticultural hall, the quaint collection in the fisheries, the array of statuary and paintings in the art galleries, the historical exhibit of transportation methods, the display of educational institutions, or the products of the world's factories in the Manufactures building—no matter what the section, it may be described without any exaggeration as the biggest the world ever saw.

Coming to individual exhibits, there are single features conspicuous enough to overwhelm the imagination. For instance, the world's fair has a power plant of 15,000 horse-power where the Paris exposition had but 3,000. Of the 15,000 horse-power at Jackson park, 8,000 is applied by electricity, while the Centennial had no electrical exhibits save a few arc lights. One engine of this big plant has 2,000 horse-power capacity, eclipsing the Corliss engine at the Centennial, and outdoing anything ever attempted in mechanical apparatus in this country.

In the agricultural section is to be a mammoth among commonplace displays. It is a cheese—a plain, Canadian cheese, but its weight is 26,000 pounds, its height six feet and its diameter nine feet. It furnishes so much weight within a small area that the foundation of the floor had to be strengthened to sustain it.

In the live stock department will be seen the largest steer in the world, a blooded animal owned by George W. Childs, the famous philanthropist and fancier of fine flowers and stock.

Kentucky has prepared a surprise for sight-seers who know little of her mineral wealth, and particularly her coal mining industry. It will be a solid block of bituminous coal 60 feet high, mined in one piece and occupying a point of vantage in the Mines building.

One of the rarest and most interesting of the big displays will be from the Kimberly diamond mines in South Africa. Heretofore the diamond fields have confined their exhibition efforts to illustration of lapidary processes. At the Columbian exposition visitors will see Kaffir natives from the Cape of Good Hope, washing diamonds from the blue earth in which they are found; they will see the rough stones sorted, put through the grinding and polishing process by Dutch lapidaries; and they will see on exhibition the greatest collection of gems, polished and in the rough, that has ever been gathered outside a royal palace. In the same building, not far from the diamond washers, will be the gold and silver quartz displays of California, Montana, Colorado, Arizona, New Mexico and other mining communities.

Most people associate the thought of quartz with a mental picture of uninteresting stone heaps, bearing little trace of value and of interest only to geologists. The miners of the country are determined to show such sight-seers that gold and silver-bearing quartz are among the most beautiful and picturesque features of an exhibition when they are developed properly. In this particular display the most valuable veins of the far west will furnish pyramids, arches and spires of ore rich enough to recall the fables of Golconda. No accurate estimates can, of course, be placed upon unsmelted gold or silver, but conservative experts who know what is to be exhibited say the gold and silver camps will send a display worth more than a million dollars.

Horticultural hall is at the head of the procession of giant displays. It already has 10,000 primroses blooming in one collection, which government florists declare is beyond question the largest and most beautiful display of the kind ever grown. It has the largest tree-fern ever sent out of Australia—a monster 50 feet high, measuring nearly two feet at the base. It has a garden of 100,000 hardy roses planted on the wooded island last fall; the greatest collection of pansies in existence, and a projected display of chrysanthemums that will equal all the great chrysanthemum shows of this country and Europe rolled into the big aggregation.

Then there is the section of a monster or big redwood tree in the government building which required 11 cars for transportation from California. The section is used in the center of the building as a two-storied reception hall and is large enough to furnish comfortable quarters for 100 guests at a time.

The state of Washington comes in the category of these exhibits with the timbers for its state building at the park. The foundation-timbers are of pine; each measures 120 feet long in single sections and is 30 inches through, dressed. In front of the building is a flagstaff, 120 feet high, in one piece. Kansas shows the variety of the country's forest monstrosities in a section of a walnut log 9 feet in diameter and so heavy that, like the big cheese, it has to have a special foundation in the Forestry building.

Wisconsin's curiosity is a monolith of granite, outclassing Cleopatra's needle and every other known monolith. It is 115 feet high, is something like 20 feet square at the base, and will occupy a place of honor immediately in front of the Wisconsin state building.

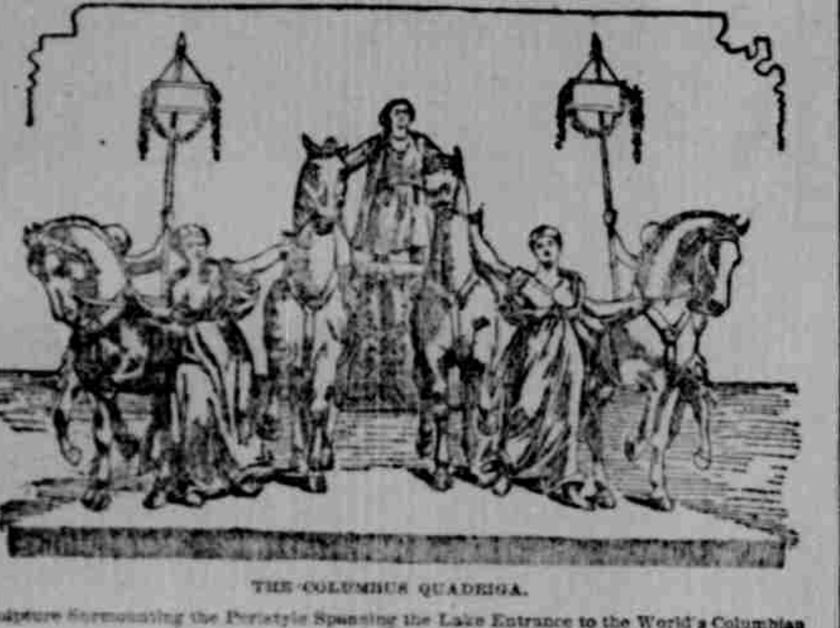
Krupp, the great cannon maker of Germany, is coming with the biggest cannon ever made. Its size may be judged by the statement, given as a fact, that it can throw a 200-pound projectile 40 miles. The skeptic may doubt that, but the railroads and steamships have attested its enormous size by refusing to even attempt its transportation unless the maker will furnish hoisting machinery stronger than they possess, and agree to send with cars strong enough to carry it.

A crowning feature of all the leviathans will be the search lights built in Nuremberg, Germany, to be installed on the towers of the Electricity building. If the maker's words may be taken as truth, the largest of these lights will be the most powerful in existence. According to his statement, it will furnish ample illumination for reading at a distance of thirty miles from Chicago; and, according to the same authority, a lawn party in Milwaukee would be better lighted from the electric tower in Chicago than if lamps of the ordinary coal oil pattern were distributed about the lawn.

The search lights will be used on occasion as signals to mariners and a scheme has been suggested whereby messages could be sent across the lake to St. Joseph, Mich., with these same lights operated on the Morse system of dots and dashes.

It would be easy to describe these spectacular features of the world's fair in endless length. Those enumerated are but isolated instances in an aggregation of indescribable magnitude. They are to the main exhibits as one peak might be to a mountain range. A stranger traveling through the grounds might spend a week within the gates and not discover half of them, unless he devoted special search, so bewildering will be the extent of the general exhibits.

W. M. IGLEHEART.



THE COLUMBUS QUADRIGA.

Sculpture Surmounting the Peristyle Spanning the Lake Entrance to the World's Columbian Exposition.

FAIR APPROPRIATIONS.

Nine Million Dollars to Be Spent by Home and Foreign States.

Nearly $6,000,000 has been appropriated for exposition purposes by foreign governments and over $3,000,000 by states and territories of this country. The complete list to date is as follows, Kentucky being credited with an appropriation that is now in course of legislative approval:

Argentine	$100,000	Hawaii	$40,000
Austria	102,500	Honduras	20,000
Belgium	57,000	Hayti	25,000
Bolivia	30,000	India	30,000
Brazil	600,000	Japan	630,000
British Guiana	25,000	Jamaica	24,333
Brit'h Honduras	7,500	Leeward Islands	6,000
Barbadoes	5,840	Liberia	7,000
Colombia	100,000	Mexico	50,000
Costa Rica	150,000	Morocco	150,000
Canada	100,000	Netherlands	120,000
Cape Colony	50,000	Nicaragua	31,000
Ceylon	65,000	Norway	56,280
Cuba	25,000	New S. Wales	243,325
Denmark	67,000	Orange Fr. State	7,500
Danish W. India	1,240	Paraguay	100,000
Dutch Guiana	10,000	Peru	140,000
Dutch W. India	5,000	Russia	45,220
Ecuador	125,000	Salvador	12,500
France	733,400	San Domingo	25,000
Germany	690,000	Spain	214,000
Great Britain	291,000	Sweden	108,000
Greece	50,000	Trinidad	15,000

The state and territorial appropriations follow:

Arizona	$30,000	Nebraska	$50,000
California	300,000	New Hampshire	25,000
Colorado	100,000	New York	300,000
Delaware	10,000	New Jersey	70,000
Idaho	20,000	New Mexico	25,000
Illinois	800,000	North Carolina	25,000
Indiana	75,000	Ohio	100,000
Iowa	125,000	Pennsylvania	300,000
Kentucky	50,000	Rhode Island	25,000
Maine	40,000	Vermont	15,000
Massachusetts	75,000	Washington	100,000
Michigan	100,000	West Virginia	40,000
Minnesota	50,000	Wisconsin	65,000
Missouri	150,000	Wyoming	30,000
Montana	50,000		

Curious Scene at the World's Fair.

The other day the Turks consecrated the grounds on which the Turkish pavilion of the world's fair will be erected. First they killed a large white sheep as a sort of insurance to prevent Allah from destroying the building. A hundred men in bulging breeches, rimless red fez and red slippers stood around the sheep. One prayed, another tied a bandage over the eyes of the sheep, and Fahri Bey cut the animal's throat. After this everybody went to the Turkish village, and the sheep was there cooked and eaten.

Small, But Perfect.

In sour paste, vinegar, the melt of codfish, or even in water in which decayed vegetables have been infused, the microscope reveals animalcules (little animals) so small that millions of them would not equal a common grain of wheat in bulk.

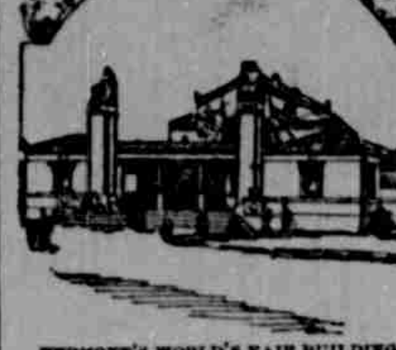
The Kaiser's Equine Exhibit.

It is said that the emperor of Germany will send to the world's fair a number of Trakehner stallions from his own stables, which he himself uses as carriage horses. The other German horses that are to be exhibited are mostly of the Hanover and Holstein breeds. The Trakehners are beautiful animals with silky black coats, are swift and have nobly poised heads.

VERMONT'S BUILDING.

It Will Be of the Pompeian Style of Architecture.

The Vermont building at the world's fair will be, when completed, one of the most unique on the grounds. The style is Pompeian. On the right and left of the entrance are two shafts with allegorical figures, representing agriculture and quarrying and stonecutting—the two principal industries of the state. The entrance is through a portico into a courtyard, in the center of which is a handsome marble fountain. Marble will also be used all through the interior. On the right and left are



VERMONT'S WORLD'S FAIR BUILDING.

covered porches, off which lead the reception room, committee room, post office, etc. At the end of the court is a porch supported by five caryatids, on which is a semi-circular Greek window with a bas-relief around it, representing freedom and unity. In the rear is the circular reception hall with wooden-beamed dome. To the efforts of Dr. H. H. McIntyre, of Vermont, and Col. Aldace F. Walker, of Chicago, is mainly due the success of this building. Jarvis Hunt, of Boston (nephew of William Morris Hunt, the artist, and Richard M. Hunt, architect of the administration building), is the architect. This building will be used for social purposes only.

LIFT YOUR HATS.

Neglect to Do So on Meeting a Lady Is a Breach of Good Manners.

"There are two occasions upon which I never will recognize a gentleman, not even my own husband," said a well-known society woman the other day to a New Orleans Picayune man. "If he is sitting on a street corner to have his shoes blacked he might bow at me till the crack of doom, but I would not recognize him. Or if he was coming out of a saloon."

"Did you ever have a man greet you in the street without lifting his hat?" asked a friend.

"Once or twice, but I never recognized that individual again. One of the best known clergymen in New Orleans makes a habit of not raising his hat to some ladies he knows. He would not feel flattered if he could hear the comments that are made on his boorish manners."

"Perhaps he forgets," said a man who was ready to defend his sex.

"That is no excuse. I would not expect an armless man to lift his hat to me on the street, but nothing less could excuse him. A gentleman has no business to forget at least the appearance of good breeding. A woman feels a man has treated her with almost familiar contempt who does not lift his hat when speaking to her, and if she has any spunk at all she will never bow to him again."

TREE RESIDENCE.

One of the Features of the Government's World's Fair Exhibit.

In the center of the dome of the government building, rising up thirty feet from the floor level, is the hollow trunk of a giant redwood tree, twenty-one feet in diameter. Inside of its walls, two feet in thickness, is a very comfortable sitting-room space. The walls have been planed and the ceiling of one compartment and the floor of that above it are formed by a transverse section of the tree, sixteen inches thick. This section is held up by cross-sections of railroad rails, and the interior

EXTERIOR OF THE TREE RESIDENCE.

is lighted by electricity. A ladder leads upward through the ceiling to the second floor, and below a full-sized single doorway has been cut from the east side. It will be fitted up as a residence.

THE WEIGHT OF A THOUGHT.

How It Was Determined by a Roman Physiologist.

A scientific journal of high repute is authority for the statement that Prof. Masso, the Roman physiologist, has invented a machine that will actually give the weight of a thought. To quote from the account mentioned: Prof. Masso showed by experiment that the effort of thinking causes a rush of blood to the brain, this blood-rush varying in intensity according to the thought. He placed a man in the machine, which was so delicately balanced that the rush of blood turned the scale. The professor says that when the subject is sleeping the thoughts or visions which come to him in his dreams are sufficient to cause the head to sink below the feet, and that the same takes place when the subject is disturbed by a slight sound.

He further declares that the balance will indicate when a person is reading Italian and when Greek, the greater mental exertion required for Greek producing a more profuse rush of blood to the head.

Statue in Salt.

A reproduction in salt of the Goddess of Liberty on Bedloe's island is being sculptured at the offices of the Salt union, in Winsford, England, for exhibition at the Chicago fair.

WILL BE OUR GUARD

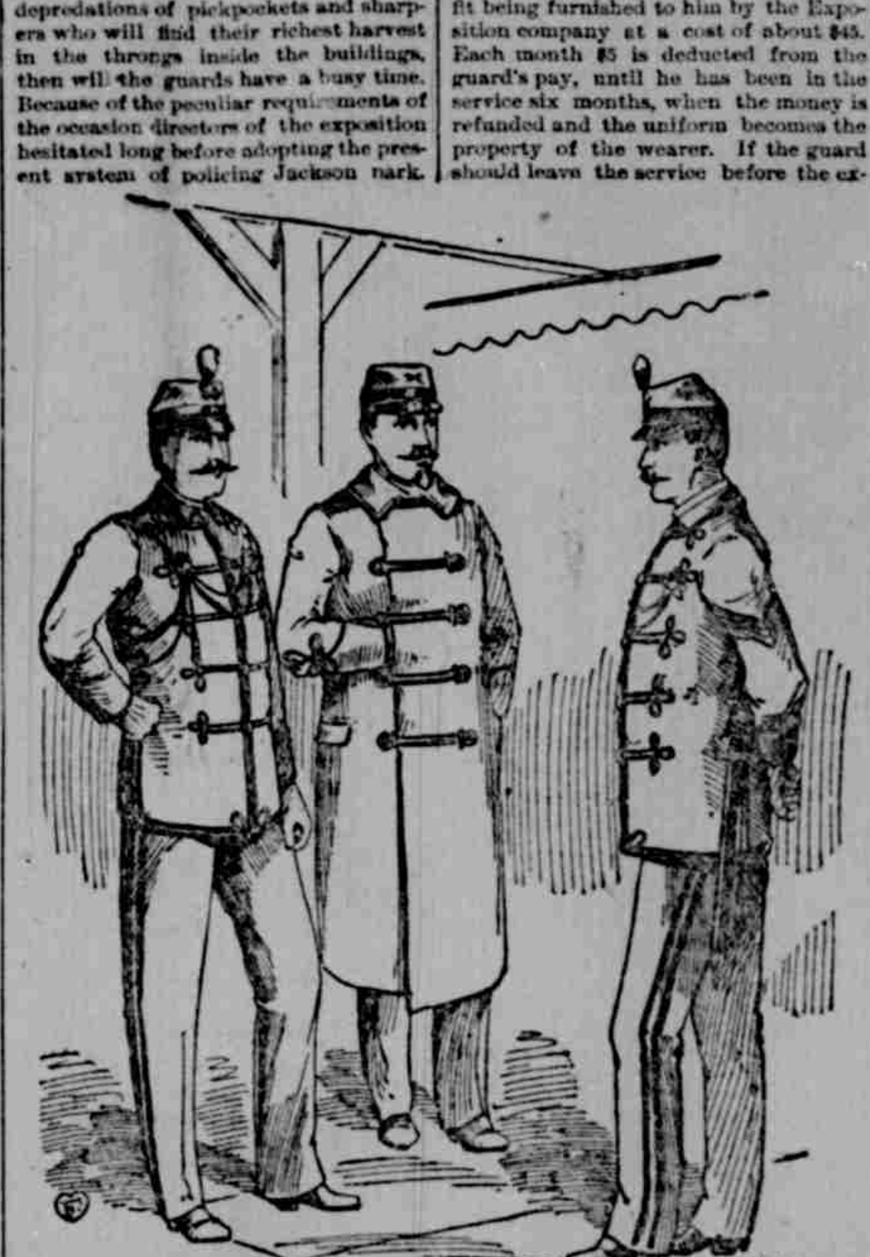
How Visitors to the World's Fair Will Be Protected.

STALWART MEN OF BRAWN

The Irreproachable Body of Men Under Command of Colonel Rice—An Intelligent Police Force.

When the exposition buildings at the world's fair grounds are thrown open to the world on the first of May, it is estimated that materials valued at $350,000,000 will be on exhibition. By an arrangement with the Underwriters National association the exposition company will place insurance to the amount of $80,000,000 on the buildings and their contents. As the buildings stand to-day they are valued at $20,000,000, including structures erected by the several states, and to protect them from fire every possible precaution has been taken. In addition to the maintenance of a battalion of the Chicago fire department on the grounds, and a rigid enforcement of laws governing the use of lights, fires in buildings, smoking on the grounds, etc., the Columbian guard was formed, every member of which, in addition to police powers conferred by the city of Chicago, is a member of a fire company and is drilled at regular intervals in the use of Babcock extinguishers, hose practice and ladder work. Should a fire occur in Jackson park to-day four engine companies stationed within the grounds, three from the city, two hook and ladders, six hose carts and 600 Columbian guards could be relied upon to answer the first alarm.

The daily routine of a Columbian guard is dull enough now, but when the exposition is opened, and thousands of visitors, each of whom will ask numberless questions, and who must be protected from accident as well as the depredations of pickpockets and sharpers who will find their richest harvest in the throngs inside the buildings, then will the guards have a busy time. Because of the peculiar requirements of the occasion directors of the exposition hesitated long before adopting the present system of policing Jackson park.



COLUMBIAN GUARDS.

The disadvantage of appointing patrolmen after the municipal system was at once recognized, and it was finally deemed best to make the Columbian guard semi-military in character, leaving the appointing power in the hands of a chief, to be selected for his fitness in handling and organizing military bodies. At the request of the exposition directors President Harrison ordered Capt. Edmund Rice, Fifth infantry, U. S. A., to report to Director General Davis, and Capt Rice submitted the plan of organization which led to the present organization. The Columbian guards was organized by the exposition company with Capt. Rice placed in command with the rank of colonel. The new commander called to his assistance other military men, some from the regular army, others from the state militia, and the first call for troops was issued last September. There were hundreds of applicants, of whom less than 50 were accepted. The exactions of military qualifications as to height, weight and physical conditions proved a bar to many applicants, while others were rejected for lack of moral and mental fitness.

Intelligence, good character, steady habits, and a physique that stands the test required of recruits entering Uncle Sam's service, soon drove the crowds of loafers and lazy fellows from the field. They found that political influence availed them nothing with Col. Rice, who was absolutely untrammeled and impartial in the selection of men for his guards. With this undesirable class out of the way, a better class of applicants came by hundreds; students from colleges, anxious to earn enough during the summer months to enable them to pursue their studies next year; ambitious young men from city and country who desired to avail themselves of the advantages they might derive during their hours off duty; applications even from clergymen, physicians and lawyers from Europe as well as America, their object apparently being educational advantages, rather than for the modest salary paid the guards. There was no stimulation as to age, however, provided the applicant had reached twenty-one, and an old soldier in good physical condition was never rejected. As a result Col. Rice has under his command 600 men far above the average in intelligence, in appearance and in gentlemanly bearing. Erect, vigorous and handsomely uniformed, carefully drilled, imposing, polite, they are as unlike the ordinary policeman on guard as can be imagined. At present there are but six companies, comprising 600 men. This number will be increased to 2,500, perhaps more if necessary, by the time the exposition opens. This is not to be construed to mean that Col. Rice has 1,900 or more places to fill, for most of them are already assigned to young men now hard at work over their books in colleges all over the land. Thus indirectly the exposition is an aid to education.

Appointment to a place in Col. Rice's command is of easier access than positions that politics control. Any young man can apply in person or by letter to Col. Edmund Rice, Service building, Jackson park, and secure immediate hearing. Letters of introduction from members of state world's fair commissioners or other public and well-known persons are naturally of assistance to the applicant, though not indispensable. The applicant in person will be questioned by Col Rice as to his habits, morals and mental equipment, and if the interview be satisfactory—and Col. Rice has been a soldier all his life, handling troops in the civil war and many Indian campaigns, and reads faces as most men read a printed page—the applicant is referred to Dr. Yeager, or some of his assistants in the Columbian medical bureau, for physical examination. Having stood this test the applicant is dismissed to hold himself in readiness for summons for service.

When that summons comes the applicant presents himself before Quartermaster Hoppen, who is a lieutenant in Uncle Sam's Second cavalry, but ranks as captain in the Columbian guard. The applicant is measured for a uniform, consisting of cap, dark blue blouse, similar to the fatigue uniform worn by army officers, and trousers of the regular army blue—with a black and red stripe on the side. A police whistle and bronze crossbow on which the guard number is engraved, and a short two-edged sword worn in an ornamental scabbard at the hip, complete the equipment. If he chooses, the guard can also be provided with a storm coat, overcoat and rubber boots, the total outfit being furnished to him by the Exposition company at a cost of about $45. Each month $5 is deducted from the guard's pay, until he has been in the service six months, when the money is refunded and the uniform becomes the property of the wearer. If the guard should leave the service before the expiration of six months Quartermaster Hoppen appraises the value of the uniform, which is returned by the guard, and pays the latter the difference held out of his pay.

From the quartermaster the new guard, after having taken the oath of office and sworn in with full police powers by a city official, is sent to the drill room, where he becomes a member of the awkward squad. Energetic drill masters soon give him grace and freedom of motion, the graceful military salute, and standing at "attention" when addressed by superior officer or civilian soon become easy and natural methods. He is assigned to service in one of the companies and may live outside the grounds on barracks provided in a roomy structure especially erected at Sixty-second street and Stony Island avenue. Eight hours each day he is on duty, the first week from 9 a. m. to 1 p. m. and from 9 p. m. until 1 a. m.; the second week from 1 a. m. until 9 a. m. The reliefs are so arranged that each guard gets a half holiday each week. Careful attention to personal appearance, with neatly blackened shoes, clean linen, just showing above the closely-buttoned blouse, and the wearing of white cotton gloves, are required of each guard while on duty. He must be at all times respectful and attentive to the questioning of visitors, and must be a living encyclopedia of everything concerning the grounds, buildings, locations of exhibits, etc. He must be alert ... prompt to respond to ambulance service as a member of the hospital corps, and untiring in vigilance as a fireman. He may use tobacco off duty only, and at all times must maintain dignified and respectful attitudes toward the public he is employed to serve. In barracks he may read, smoke, play—poker excepted—cards, or indulge in any form of recreation not disturbing to occupants of the dormitories. Lights are extinguished promptly at 9 o'clock each night in the dormitories, and the lone sentry is hailed at regular intervals by an inspector of the guard whose duty it is to see that guards on the grounds and in the buildings are not sleeping at their posts or otherwise neglecting their duty. There is no appeal from the decision of Col. Rice when a guard has been found asleep at his post. Dismissal is prompt and irrevocable. The pay of the rank and file is $60 per month, though there is a system of promotion which some of the present members will profit by when new companies are formed, whereby they will receive $75 for a month's service.

The police system of the exposition is yet more intricate than the employment of good-looking and physically sound men for the guard. Capt. Horace Elliott, for many years a member of the Chicago police force, and recently retired on half pay for age, is in charge of the gatemen. Photographed on Capt. Elliott's memory are the faces of thousands of noted criminals, and many of his assistants are old-time thief takers. Many a visitor to the fair will be "spotted" before he gets inside the grounds, and his every move will be shadowed by a detective. The secret service department, under Capt. Bonfield, will include detectives from every large city in America and Europe. Noted confidence men, pickpockets and ordinary criminals will be under strictest surveillance. It is to be expected that the exposition will attract thousands of the criminal classes, and unusual police precautions have already been taken to protect the public from their wiles.

PAUL DE H. SWEENEY.

COLUMBUS' FLAGSHIP.

Model of the Santa Maria Now at Jackson Park.

The model of the Santa Maria, the flagship of the Columbus fleet, has arrived from San Domingo and will soon ride the waves of the Jackson park lagoon. That is, it will attempt to ride

AS THE SANTA MARIA NOW APPEARS.

them, but as to its probable success there is a diversity of opinion. Some of those brilliant land-lubbers who are made glorious by the uniform of the Columbian guard aver that the "Maria" is quite a ship. But anyone who has ever been out of sight of land would hesitate to venture aboard the new arrival.

How the Spaniards ever succeeded in reaching America in such a craft is puzzling the salts who hang about Jackson park. In general appearance the model resembles two huge spareribs riveted together and given a deck, prow and helm. The boat, however, is guaranteed to be historically correct, and it will no doubt attract the attention of millions of those who will visit the fair. The spot where it will be located has not yet been decided upon.

RHODE ISLAND'S ODD CUSTOM.

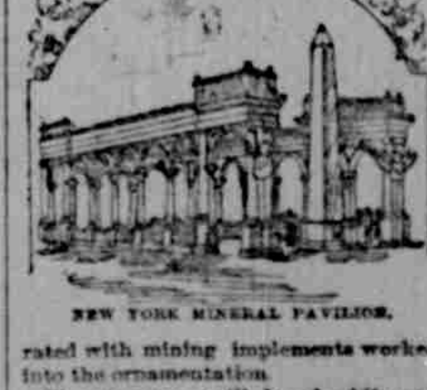
The Election of Black Governor in the Old Colonial Days.

A rollicking time in Rhode Island in the old colonial days was the election of the "Black Governor," described in the New England Magazine. After the white people had elected the governor of the state, the slaves had a curious custom of gathering together on the third Saturday in June and electing a black governor. To this election the negroes went in fine style, on Narragansett pacers, with their wives on pillions behind them. All were dressed in their finest clothes, with swords and with powdered hair, and often a long false queue tied on behind. When all had gathered together, the vote was taken by the opposing parties forming into two long lines, with the respective candidates at the head; the lines were then counted, and the longest line elected its candidate. After the election a supper and dance were given, for which the white owner of the newly elected black governor had to pay. The last election of a slave governor was held in 1800, but the custom of "Nigger 'Lection" day did not die out through New England until many years later.

MINERAL PAVILION.

Interesting World's Fair Building to Be Erected by New York.

One of the prettiest structures which will be erected by New York state will be that for the mineral exhibit. Architect Isaac G. Perry has just completed the drawings for it. They call for a rectangular pavilion in pure Roman-Ionic architecture, 31x61x22 feet high. The four corners are to be surmounted by balustrades; the caps of the fluted columns are to be richly carved; there will be an ornamental frieze, and the spandrels will be deco-



NEW YORK MINERAL PAVILION.

rated with mining implements worked into the ornamentation.

The structure will be of white and gold. There will be a balustrade all about the floor, except across the front. The front, or entrance, is of a concave half circle. Directly opposite the entrance an obelisk will rise to a height of thirty feet. This will be three feet square at the base and taper gradually to the top.

It will be composed of rocks illustrating the geological formation of the earth as has been developed by research. The accompanying illustration gives an excellent idea of how the completed pavilion will look.

MEXICO NEEDS IMMIGRANTS.

People From Northern Europe Would Set a Valuable Example of Thrift.

There is a rumor to the effect that an effort will be made in Mexico to turn the current of European emigration from the United States to that country. There is room in Mexico for many more people, but it is by no means as sparsely inhabited a country as many Americans think, says the Denver Republican. In area it is about one-fourth as great as the United States. Its population is 12,000,000. The same density in the United States would give this country about 48,000,000, which is but 2,000,000 less than the census of 1880 showed our population to be in that year.

Mexico needs a different kind of population, rather than an increase. About one-half the people are full blooded Indians, and of these one-half are uncivilized. There are about 1,000,000 whites, the majority of whom, of course, are of Spanish descent. The remainder, with the exception of a few negroes and Chinese, are of mixed blood. Probably 6,000,000 of the inhabitants have Indian blood in their veins, two-thirds of this number being full blood. The hope of the country is, therefore, in the people who have Indian blood. If they shall not develop to a high civilization the country will always be governed by a small class, composed chiefly of the whites.

Fortunately the civilized Indians of full blood are a quiet, orderly people, capable of performing a great deal of labor and attaining to proficiency in the mechanic arts. Juarez, one of the greatest of Mexican statesmen and generals, was a full-blood. The hybrids, like hybrids generally, are worse than their parents of either stock and have caused a great deal of trouble. Immigration of a good class from northern Europe would do Mexico good, because the immigrants would set an example of industry and thrift to the natives. But there is not much inducement for immigrants of the laboring, mechanic or agricultural classes to settle in Mexico. The demand for labor does not equal the supply, and the farmers would find but poor markets for their products. Mexico is a good country for men with money to invest in mining and other industries requiring large capital, but to immigrants without means the field is not inviting.

A DIFFICULT JOB.

The Mending of the Suspension Bridge at Niagara.

The cables of a suspension bridge are subjected to great strains, and are therefore firmly anchored to heavy masses of masonry by means of long bars of iron or steel having holes at each end by which they are bolted or pinned together. The Engineering News says that one of the bars in the anchorage of one end of the smaller suspension bridge at Niagara was found recently to be broken. The problem of replacing it was difficult, since the wires attached to it had to have the same tension when it was in place that they had when the old bar was intact. The new bar was formed of a piece of steel twenty feet long, six inches wide and three-quarters of an inch thick, with a hole in one end and a band bolted to the other. This band was designed to pass around an iron bar in the abutment and resist the pull of the wires. When the band had been placed about this pin in the masonry and bolted to its bar the bar was carefully heated by a wooden fire in a trough below until it had expanded sufficiently to allow the end of the wire cable to be connected with it. As it cooled it contracted until, when it reached its normal temperature, the wires attached to it were strained to the same degree as the others, and, in this way, a difficult problem was easily and cheaply solved.

THE PHENOMENA OF LIGHT.

A Puzzling Problem for Scientists of All Ages.

Several theories have been advanced by the scientists to account for the fact that we have the ever-present phenomena known as "light." The two principal of the many reasons thus set forth by the learned gentlemen who have devoted their lives to such investigation are the emission or corpuscular theory and that known as the undulatory theory. The principals of the emission theory originated in the fertile brain of the philosopher, Descartes, who was born way back in 1596. But little attention was paid this peculiar theory at that time, and it and Descartes were both almost forgotten when, about sixty years later, Sir Isaac Newton appeared upon the scene and enunciated the same doctrine.

According to these eminent men, light consists of small particles emitted by luminous bodies, the velocity of its transmission mainly regulating the colors. The undulatory theory, that now most generally accepted by the scientific world, teaches that the space between the celestial bodies is occupied by an imponderable ether; and that the luminosity of a body is supposed to be a rapid vibratory motion proceeding from the body in question to the eye. The waves of light proceed in all directions from every luminous point in straight lines; the motions of its particles being supposed to undulate in a transverse direction to the lines in which the light travels. The velocity of light is so great that the human mind cannot grasp an idea of the rapidity with which it travels. According to the best authorities attainable to the writer, the distance traveled by a beam of light in a single second of time is one hundred and ninety thousand miles. This distance is so great that no perceptible space of time would be occupied in its passage between any two given points on the earth's surface.

A Man "Up a Tree."

The following paragraph is printed in several British Indian papers: "Up a tree," wrote a native forest subordinate recently in his diary, "where I adhere with much pain and discomposure while big tiger roaring in a very awful manner on the fire line. This is a very inconsiderate tiger, and causes me great griefs, as I have before reported to your honor. This is two times he spoiled my work, coming and shouting like thunder, and putting me up a tree, and making me behave like an insect. I am not able to climb with agility owing to stomach being a little big owing to bad water of this jungle. Chenchu mans can fly up tree quickly. It is a very awful fate to me. Even when I do not see this tiger and he does not make dreadful noise, I see the marks of his hoofs and his nails on the path!"

Some Interesting Figures.

Of the total 3,642,315 square feet available for all world's fair exhibits, 1,419,677 has been assigned to foreign, and 1,787,068 to domestic applicants. Concessions absorb 211,465 square feet, and only 224,476 square feet remain unassigned in all departments. No figures are given from the live stock department because space is not assigned by area in that exhibit. The list of Germany's exhibitors contains 3,077 names. Represented in it are 250 cities and towns of the empire, and of these, forty cities send more than ten exhibits each. Berlin leads with 299 exhibitors, Munich follows with 181, Leipsic with 140, Frankfort, 55, Hamburg, 67, and Chemnitz, 41.